CONTROLLING METHOD FOR PIEZOELECTRIC MOTOR

Patent Number: JP1122375
Publication date: 1989-05-15
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Requested Patent: ☐ JP1122375
Application Number: JP19870278587 19871104
Priority Number(s):
IPC Classification: H02N2/00
EC Classification:
Equivalents: JP2001758C, JP7032610B

Abstract

PURPOSE:To accurately displace at a small distance by applying a high frequently voltage to a piezoelectric element at the time of driving it at a long stroke to roughly drive it, and applying a DC voltage thereto to finely drive it.
CONSTITUTION:A controlling method for a piezoelectric motor has first confirming a target position Xpsi, and detecting a present position X1. Then, a deviation E is obtained, and whether its absolute value is a reference deviation amount epsilon or less or not is judged. In case of ¦E¦>epsilon, a direction for driving with a signal of the deviation E is judged, and the motor is driven by a resonance frequency high frequency voltage in a direction + or -. Further, in case of ¦E¦<=epsilon, the motor is driven by a DC voltage. The reference deviation amount epsilon is defined as a value within the maximum stroke of a drive upon application of the DC voltage. An accurately fine displacement is performed after a position corresponding to the deviation amount.